

WHAT IS CLAIMED IS:

1. A torque sensor comprising:

a first shaft

a second shaft capable of performing relative rotation, elastically, with respect to

5 said first shaft;

a first alternating signal source which outputs a sinusoidal first alternating signal the phase of which changes in accordance with change in the rotation angle of said first shaft;

a second alternating signal source which outputs a sinusoidal second alternating
10 signal the phase of which changes in accordance with change in the rotation angle of said second shaft;

an output signal processing section which outputs a phase difference
correspondence signal the waveform of which changes in accordance with change
in the phase difference between said first alternating signal and said second
15 alternating signal;

a determining part which determines a first distortion indicator value which changes in accordance with the waveform distortion of said first alternating signal;

a determining part which determines a second distortion indicator value which
20 changes in accordance with the waveform distortion of said second alternating signal; and

a correcting part which corrects the value corresponding to the torque which is determined from said phase difference correspondence signal and transmitted by said first and second shafts, on the basis of a value corresponding to the
25 difference between said first distortion indicator value and said second distortion

indicator value.

2. The torque sensor according to claim 1, wherein the time period from the time at which the value of said first alternating signal becomes zero until the time at which the integral value of said first alternating signal becomes zero is determined as said first distortion indicator value, and wherein the time period from the time at which the value of said second alternating signal becomes zero until the time at which the integral value of said second alternating signal becomes zero is determined as said second distortion indicator value.